

=====

Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=7; day=21; hr=16; min=11; sec=46; ms=694; ]

=====

Application No: 10805683 Version No: 2.0

Input Set:

Output Set:

**Started:** 2008-06-13 20:04:16.894  
**Finished:** 2008-06-13 20:04:34.303  
**Elapsed:** 0 hr(s) 0 min(s) 17 sec(s) 409 ms  
**Total Warnings:** 20  
**Total Errors:** 15  
**No. of SeqIDs Defined:** 20  
**Actual SeqID Count:** 20

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
E 257	Invalid sequence data feature in <221> in SEQ ID (2)
E 257	Invalid sequence data feature in <221> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
E 257	Invalid sequence data feature in <221> in SEQ ID (3)
E 257	Invalid sequence data feature in <221> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
E 257	Invalid sequence data feature in <221> in SEQ ID (7)
E 257	Invalid sequence data feature in <221> in SEQ ID (7)
E 257	Invalid sequence data feature in <221> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
E 257	Invalid sequence data feature in <221> in SEQ ID (8)
E 257	Invalid sequence data feature in <221> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
E 257	Invalid sequence data feature in <221> in SEQ ID (9)
E 257	Invalid sequence data feature in <221> in SEQ ID (9)

**Input Set:**

**Output Set:**

**Started:** 2008-06-13 20:04:16.894  
**Finished:** 2008-06-13 20:04:34.303  
**Elapsed:** 0 hr(s) 0 min(s) 17 sec(s) 409 ms  
**Total Warnings:** 20  
**Total Errors:** 15  
**No. of SeqIDs Defined:** 20  
**Actual SeqID Count:** 20

Error code	Error Description
E 257	Invalid sequence data feature in <221> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
E 257	Invalid sequence data feature in <221> in SEQ ID (10)
E 257	Invalid sequence data feature in <221> in SEQ ID (10)
E 257	Invalid sequence data feature in <221> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20) This error has occurred more than 20 times, will not be displayed

# SEQUENCE LISTING

<110> MPA Technologies, Inc.  
Charles, Spangler W.  
Aleksander , Rebane

<120> Multifunctional Photodynamic Agents For Treating Of Disease

<130> A-72170-1

<140> 10805683

<141> 2008-06-13

<150> US 60/453,618

<151> 2003-03-10

<160> 20

<170> PatentIn version 3.4

<210> 1

<211> 14

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide (Somatostatin 14)

<220>

<221> DISULFID

<222> (3)..(14)

<400> 1

Ala	Gly	Cys	Lys	Asn	Phe	Phe	Trp	Lys	Thr	Phe	Thr	Ser	Cys
1				5					10				

<210> 2

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide (Octreotate)

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> D isomer

<220>

<221> DISULFID

<222> (2)..(7)

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> D isomer

<300>

<301> Becker, A., Hessianus, C., Licha, K., et al.

<302> Receptor-targeted Optical Imaging of Tumors with Near-infrared  
Fluorescent Ligands

<303> Nature Biotech.

<304> 19

<305> 4

<306> 327-31

<307> 2001

<400> 2

Phe Cys Phe Trp Lys Thr Cys Thr

1 5

<210> 3

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide (M2M7 Octreotate)

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> D isomer

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> D isomer

<400> 3

Phe Met Phe Trp Lys Thr Met Thr

1 5

<210> 4

<211> 5

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide

<220>

<221> MISC\_FEATURE  
<222> (1)..(1)  
<223> Xaa=t-butoxycarbonyl (BOC)

<220>  
<221> MISC\_FEATURE  
<222> (5)..(5)  
<223> Residue modified by aminomethylcoumarin (AMC)

<400> 4

Xaa Ala Gly Pro Arg  
1 5

<210> 5  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<300>  
<301> Netzel-Arnett, S., et al.  
<303> Biochem.  
<304> 32  
<306> 6427-6432  
<307> 1993

<400> 5

Pro Met Ala Leu Trp Met Arg  
1 5

<210> 6  
<211> 4  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 6

Leu Trp Met Arg  
1

<210> 7  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Residue modified by (7-methoxycoumarin-4-yl)-acetyl (or Mca)

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> Xaa= [-3-(2,4-dinitrophenyl)-L- 2,3 diaminopropionyl] (or Dpa)

<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> AMIDATION

<400> 7

Pro Leu Gly Leu Xaa Ala Arg  
1 5

<210> 8  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Residue modified by 2,4-dinitrophenyl group (or DNP)

<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> AMIDATION

<400> 8

Pro Leu Gly Ile Ala Gly Arg  
1 5

<210> 9  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Residue modified by (7-methoxycoumarin-4-yl)-acetyl (or Mca)

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> Xaa=[-3-(2,4-dinitrophenyl)-L- 2,3 diaminopropionyl] (or Dpa)

<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> AMIDATION

<400> 9

Pro Leu Gly Pro Xaa Ala Arg  
1 5

<210> 10  
<211> 12  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Residue modified by (7-methoxycoumarin-4-yl)-acetyl (or Mca)

<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> Xaa=[-3-(2,4-dinitrophenyl)-L- 2,3 diaminopropionyl] (or Dpa)

<220>  
<221> MOD\_RES  
<222> (12)..(12)  
<223> AMIDATION

<400> 10

Pro Leu Ala Gln Ala Val Xaa Arg Ser Ser Ser Arg  
1 5 10

<210> 11  
<211> 8  
<212> PRT  
<213> Artificial

<220>



<223> Synthetic Peptide

<400> 11

Gly Pro Leu Gly Leu Arg Ser Trp  
1 5

<210> 12

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide

<400> 12

Gly Pro Leu Pro Leu Arg Ser Trp  
1 5

<210> 13

<211> 5

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide

<300>

<301> van Hinsbergh, et al.

<303> Annals of Oncology

<304> 4

<306> 60

<307> 1999

<400> 13

Gly Arg Gly Asp Ser  
1 5

<210> 14

<211> 5

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide

<300>

<301> van Hinsbergh, et al.

<303> Annals of Oncology

<304> 4

<306> 60

<307> 1999

<400> 14

Tyr Ile Gly Ser Arg  
1 5

<210> 15

<211> 6

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide

<300>

<301> van Hinsbergh, et al.

<303> Annals of Oncology

<304> 4

<306> 60

<307> 1999

<400> 15

Ser Ile Lys Val Ala Val  
1 5

<210> 16

<211> 7

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide

<220>

<221> SIGNAL

<222> (1)..(7)

<223> nuclear localization signal of SV40 (monkey virus) large T  
Antigen

<300>

<301> Kalderon, et al,

<302> A short amino acid sequence able to specify nuclear location

<303> Cell

<304> 39

<305> 3

<306> 499-509

<307> 1984-12

<400> 16

Pro Lys Lys Lys Arg Lys Val  
1 5

<210> 17  
<211> 6  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<220>  
<221> SIGNAL  
<222> (1)..(6)  
<223> human retinoic acid receptor-1 nuclear localization signal

<400> 17

Ala Arg Arg Arg Arg Pro  
1 5

<210> 18  
<211> 10  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<220>  
<221> SIGNAL  
<222> (1)..(10)  
<223> nuclear localization signal NFkappaB 50

<300>  
<301> Ghosh, et al.  
<303> Cell  
<304> 62  
<306> 1019  
<307> 1990

<400> 18

Glu Glu Val Gln Arg Lys Arg Gln Lys Leu  
1 5 10

<210> 19  
<211> 9  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<220>  
<221> SIGNAL  
<222> (1)..(9)  
<223> nuclear localization signal of NFkappaB 65

<300>  
<301> Nolan, et al.  
<303> Cell  
<304> 64  
<306> 961  
<307> 1991

<400> 19

Glu Glu Lys Arg Lys Arg Thr Tyr Glu  
1 5

<210> 20  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<220>  
<221> SIGNAL  
<222> (1)..(20)  
<223> double basic nuclear localization signal in nucleoplasmin

<300>  
<301> Dingwall, et al.  
<303> Cell  
<304> 30  
<306> 449-458  
<307> 1982

<300>  
<301> Dingwall, et al.  
<303> J. Cell Biol.  
<304> 107  
<306> 641-849  
<307> 1988

<400> 20

Ala Val Lys Arg Pro Ala Ala Thr Lys Lys Ala Gly Gln Ala Lys Lys  
1 5 10 15

Lys Lys Leu Asp  
20